

HOT WATER-RESISTANT PAPER CONTAINER

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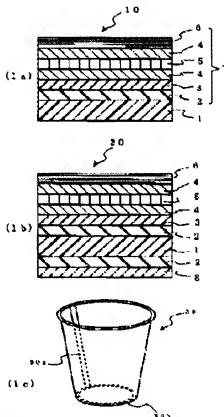
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Abstract of JP2003112719

PROBLEM TO BE SOLVED: To provide a hot water-resistant paper container consisting of a multilayer-constituent laminated sheet formed of paper as a main component, sterilizable by heat application such as retort sterilization, and using a laminated sheet which is formed of a paper base material as a main component and which is excellent in gas barrier properties and steam barrier properties. **SOLUTION:** The hot water-resistant paper container consists of a laminated sheet including at least a paper layer, a barrier layer and a sealant layer. The paper layer is formed of base paper impregnated or coated with any resin selected from among a silane resin, a melamine resin, a urethane resin, an isocyanate resin, an acrylic resin, a polyester resin, a polyethylene resin, a polypropylene resin, and the like.



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Applicant : TOPPAN PRINTING CO., LTD

Title of the Invention : HOT WATER-RESISTANT PAPER CONTAINER

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Translation of Claims

[Claims]

[Claim 1] A hot water-resistant paper container formed of a laminated sheet including at least a paper layer, a barrier layer, and a sealant layer, wherein
15 the paper layer is formed of base paper impregnated or coated with any resin selected from a silane resin, a melamine resin, a urethane resin, an isocyanate resin, an acrylic resin, a polyester resin, a polyethylene resin, a polypropylene resin, etc.

[Claim 2] The hot water-resistant paper container according to claim 1,
20 wherein a side portion and a bottom portion of the hot water-resistant paper container are sealed by bonding an overlap width panel portion to an end inner surface of a side face panel portion located on the opposite side to the overlap width panel portion after skiving and hemming a paper layer corresponding to the overlap width panel portion.

[Claim 3] The hot water-resistant paper container according to claim 1 or 2,
25 wherein the side portion is sealed with hot air, a high frequency wave, or an ultrasonic wave.

[Claim 4] The hot water-resistant paper container according to claim 1 or 2,
wherein the bottom portion is sealed with hot air.

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Translation of paragraph [0001] and [0002]

[0001]

[Field of the Invention] The present invention relates to a paper container with hot-water resistance including, as a base material, paper that can be
35 heat-sterilized and is excellent in gas barrier properties and water vapor barrier properties.

[0002]

[Prior Art] Conventionally, the forms of food containers that allow a long period of distribution at ordinary temperatures are mainly retort containers (metal cans and plastic containers) and retort pouches (flat pouches and standing pouches). Metal cans are used for content foods for which retort pouches are not suitable, such as solids and laminates. However, recently, environmental concerns are emphasized, and thereby containers and packaging materials are required to be easily disposable. There is an increasing demand for easy-incineration properties, recycling efficiency, or the use of recycled materials. Similarly, in the fields of bottles, tray-shaped paper containers, and composite containers of paper containers and plastic, various products have been proposed including, for example, a so-called paper product in which the amount of plastic to be used is reduced considerably, and a composite container in which paper and plastic can be separated at the time of disposal in the field of containers. Particularly, the needs for ecological paper containers are increasing. On the other hand, it has been known to form packaging containers such as cups and boxes using a laminated sheet including a paper board and a gas barrier layer that are sandwiched between inner and outer surface layers of thermoplastic resin having moisture resistance such as polyethylene, polypropylene, or polyethylene terephthalate. However, in this laminated sheet, although the direct contact between the paper board and moisture or humidity can be avoided, the paper board always contains a few percent of moisture. Accordingly, when a packaging container including this laminated sheet used therein is subjected to a heat treatment such as retort sterilization, the moisture contained in the paper board is vaporized to cause a foaming phenomenon between the layers of the paper board. Furthermore, although the gas barrier layer blocks water vapor from passing therethrough, the thermoplastic resin layer made of, for example, polyethylene of the outermost surface has a water vapor permeation coefficient that increases with rise in temperature and moisture also is absorbed from outside air. Moreover, when a container that has been heat-treated is cooled, the water vapor barrier properties of the thermoplastic resin layer made of, for example, polyethylene are recovered, and thereby moisture contents absorbed by the thermoplastic resin layer during the retort sterilization are transferred to the paper board to increase the moisture content of the paper board. This decreases, for example, the

interlayer strength and rigidity of the paper board and thereby the strength of the packaging container decreases, which is a problem.